CLAIMS:

1. An encoding method for encoding an input frame sequence (201), said method comprising the steps of:

a) encoding a first sub-sequence of frames (210) from said input frame sequence (201) to produce an encoded first sub-sequence of frames (211);

b) encoding a second sub-sequence of frames (220) from said input frame sequence (201) to produce an encoded second sub-sequence of frames (212);

c) computing a first predicted frame sequence (215) from said second sub-sequence of frames (220);

d) computing a second predicted frame sequence (217) from said first sub-sequence of frames (210);

e) computing a first set of motion vectors (214) from said first predicted frame sequence (215);

f) computing a second set of motion vectors (216) from said second predicted frame sequence (217);

g) computing a first prediction residual as an error difference between said first predicted frame sequence (215) and said encoded first sub-sequence of frames (211);

h) computing a second prediction residual as an error difference between said second predicted frame sequence (217) and said encoded second sub-sequence of frames (212);

i) encoding said first prediction residual, second prediction residual, said first set of motion vectors (214) and said second set of motion vectors (216);

j) determining a network condition;

k) scalably combining said encoded first prediction residual (218), said encoded first set of motion vectors (221) and said encoded first sub-sequence of frames (211) as a first data sub-stream (245) in accordance with said determined network condition;

l) scalably combining said encoded second prediction residual (219), said encoded second set of motion vectors (222) and said encoded second sub-sequence of frames (212) as a second data sub-stream (255) in accordance with said determined network condition; and

m) independently transmitting said first and second data sub-streams (245, 255).

2. The method of Claim 1, wherein said determined network condition is a channel bandwidth determination.

3. The method of Claim 1, including a preliminary step of arranging said input frame sequence (201) in a predetermined coding order, prior to said step (a).

4. The method of Claim 1, wherein said first sub-sequence of frames (210) comprises only odd frames from said input frame sequence (201).

5. The method of Claim 1, wherein said second sub-sequence of frames (220) comprises only those even frames from said input frame sequence (201).

6. The method of Claim 1, wherein said second sub-sequence of frames (220) includes those frames from said input frame sequence (201) not included in said first sub-sequence of frames (210).

7. The method of Claim 1, wherein said first and second sub-sequence of frames (210, 220) are selected in accordance with a user preference.

8. The method of Claim 1, wherein said input frame sequence includes intraframes (I), predictive frames (P) and bi-directional frames (B).

9. An encoder 200 for encoding an input sequence of frames (201), said encoder (200) comprising:

a) encoding a first sub-sequence of frames (210) from said input frame sequence (201) in a first side encoder (202);

b) encoding a second sub-sequence of frames (220) from said input frame sequence (201) in a second side encoder (206);

c) computing a first predicted frame sequence (215) from said second sub-sequence of frames (220) in a central encoder (204);

d) computing a second predicted frame sequence (217) from said first sub-sequence of frames (210) in said central encoder (204);

e) computing a first set of motion vectors (214) from said first predicted frame sequence (215) in said central encoder (204);

f) computing a second set of motion vectors (216) from said second predicted frame sequence (217) in said central encoder (204);

g) computing a first prediction residual as an error difference between said first predicted frame sequence (215) and said encoded first sub-sequence of frames (211) in said central encoder (204);

h) computing a second prediction residual as an error difference between said second predicted frame sequence (217) and said encoded second sub-sequence of frames (212) in said central encoder (204);

i) encoding said first prediction residual, second prediction residual, first set of motion vectors (214) and second set of motion vectors (216) in said central encoder (204);

j) determining a network condition;

k) scalably combining said encoded first prediction residual (218), said encoded first set of motion vectors (221) and said encoded first sub-sequence of frames (211) as a first data sub-stream (245) in accordance with said determined network condition;

l) scalably combining said encoded second prediction residual (219), said second set of motion vectors (22) and said encoded second sub-sequence of frames (212) as a second data sub-stream (255) in accordance with said determined network condition; and

m) independently transmitting said first and second data sub-streams (245, 255) from said encoder (200).

10. The encoder of Claim 9, wherein said first side encoder (202), said second side encoder (206) and said central encoder (204) are conventional predictive encoders.

11. The encoder 200 of Claim 10, wherein said first side encoder (202), said second side encoder (206) and said central encoder (204) are scalable encoders.

12. The encoder of Claim 10, wherein said conventional predictive encoders are encoders selected from the group of encoders including MPEG1, MPEG2, MPEG4, MPEG7, H.261, H.262, H.263, H.263+, H.263++, H.26L, and H.26L encoders.

13. The encoder of Claim 9, wherein the encoder (200) is included within a telecommunication transmitter of a wireless network.

14. A system for encoding an input sequence of frames (201), the system comprising:

means for encoding a first sub-sequence of frames (210) from said input frame sequence (201) to produce an encoded first sub-sequence of frames (211);

means for encoding a second sub-sequence of frames (220) from said input frame sequence (201) to produce an encoded second sub-sequence of frames (212);

means for computing a first predicted frame sequence (215) from said second sub-sequence of frames (220);

means for computing a second predicted frame sequence (217) from said first sub-sequence of frames (210);

means for computing a first set of motion vectors (214) from said first predicted frame sequence (215);

means for computing a second set of motion vectors (216) from said second predicted frame sequence (217);

means for computing a first prediction residual as an error difference between said first predicted frame sequence (215) and said encoded first sub-sequence of frames (211);

means for computing a second prediction residual as an error difference between said second predicted frame sequence (217) and said encoded second sub-sequence of frames (212);

means for encoding said first prediction residual, second prediction residual, said first set of motion vectors (214) and said second set of motion vectors (216);

means for determining a network condition;

means for scalably combining said encoded first prediction residual (218), said encoded first set of motion vectors (221) and said encoded first sub-sequence of frames (211) as a first data sub-stream (245) in accordance with said determined network condition;

means for scalably combining said encoded second prediction residual (219), said encoded second set of motion vectors (222) and said encoded second sub-sequence of frames (212) as a second data sub-stream (255) in accordance with said determined network condition; and

means for independently transmitting said first and second data sub-streams (245, 255).

15. The system of Claim 15, further including means for arranging said input frame sequence (201) in a predetermined coding order.